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The Nordic Monitoring of Diet, Physical Activity, Smoking, Alcohol and Overweight: 2011-2014

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Authors' contributions

This work was carried out in collaboration between all authors, including planning and designing the study. The national coordinators were responsible for the acquisition of data in each of the five Nordic countries (DK: Authors VKK and SF, FI: Author KB, SE: Author HEB, NO: Author LFA, IS: Author HT).

Authors KK and JM cleaned and processed the data and performed the statistical analysis. Authors JM, LFA, HEB, KB, HT, ET and SF contributed to the chapters in the report. Authors JM and SF managed the study and combined all contributions in a final report. All authors commented on the different versions of the report and read and approved the final report.

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ABSTRACT

Background: The Nordic Plan of Action for better health and quality of life has been put forward by the Nordic Council of Ministers with the aim of reducing unhealthy lifestyles and overweight in the Nordic countries. Monitoring of health behaviour and overweight in the Nordic region is an important element in the plan. Two data collections have been carried out and this report describes status and trends from 2011 to 2014 in diet, physical activity and overweight among children and adults in the Nordic region.

Aims: The aims of the Nordic Monitoring System are to provide status and temporal trend data of diet, physical activity and overweight among children and adults in the Nordic region. Furthermore, to compare results between the Nordic countries and to evaluate diet and physical activity with current recommendations, and to examine social inequality in health behaviour and overweight. The results are evaluated against Goals 2011 and Visions 2021 set by the Nordic Plan of Action.

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Methods: Data on diet, physical activity, overweight and socio-demographics have been collected in the autumn of 2011 and 2014. In 2014, data on alcohol and smoking among adults have been included as well. Data comprised simple random samples of 2479 and 2470 children (7–12 y) and 9153 and 8595 adults (18–65 y) drawn in 2011 and 2014, respectively, from the national registers in Denmark, Finland, Iceland, Norway and Sweden. The pooled participation rate among adults in the Nordic countries was 40% in 2011 and 32% in 2014 and among children 45% in both survey years. Data were collected by telephone interviews based on a short questionnaire with validated indicator questions about dietary intake (Food Frequency Questionnaire), physical activity, sedentary behaviour, and weight and height. A parent responded for their child in the telephone interview. Key variables have been used to report the current level and trends in health behaviour and overweight in the Nordic region between 2011 and 2014, i.e. unhealthy diet (low diet quality score for frequency of intake of fruits and vegetables, fish, whole grain bread, and foods rich in saturated fat or added sugar), physical inactivity, high recreational screen time (> 4 h/day), smoking (adults in 2014), daily smoking (adults in 2014), mean total alcohol consumption (adults in 2014), binge drinking during last month (adults in 2014), overweight (including obesity), and obesity. All data were weighted according to gender, age, educational level and population size to reflect the general populations in the Nordic region. Data were analysed using descriptive statistics (t-tests and chi-square tests, $p < 0.05$).

Results: In 2014, a high prevalence of unhealthy diet (7-12 y: 15.6% and 18-65 y: 21.4%), physical inactivity (7-12 y: 59.1% and 18-65 y: 33.6%), high recreational screen time (7-12 y: 15.5% and 18-65 y: 30.0%), overweight (7-12 y: 15.4% and 18-65 y: 46.7%), obesity (7-12 y: 3.2% and 18-65 y: 12.7%), smoking (18-65 y: 20.8%), daily smoking (18-65 y: 14.8%) and binge drinking during last month (18-65 y: 45.0%) were found among children and adults in the Nordic region. A high mean total alcohol consumption (18-65 y: 1.7 freq./wk) was also found. Results show that statistically significant changes have occurred in the Nordic region from 2011 to 2014, albeit some are modest in magnitude. The prevalence of obesity increased significantly among adults from 2011 to 2014 (from 11.4% to 12.7%). The proportion of adults with an unhealthy diet (from 18.2% to 21.5%) and with high recreational screen time (from 28.6% to 30.0%) increased significantly in the Nordic region. The increasing proportion with an unhealthy diet was mainly due to a decreasing frequency of intake of fish and wholegrain bread and an increasing intake of saturated fat. Among children in the Nordic region no changes in the overall diet, physical activity and overweight were found between 2011 and 2014. Social inequality in diet, physical activity and overweight was pronounced among adults in the Nordic region and did not change across the survey years. In children, we found a large relative social difference in diet that appeared more pronounced in 2014 than in 2011, a moderate and decreasing difference in overweight, and a small and unchanged difference in physical activity. Overall, trends in adults have mainly been unfavourable or unchanged in the five Nordic countries, while trends have mainly been unchanged or favourable in children. This is reflected in the evaluation of the results in relation to Goals 2011 and Visions 2021 in the Nordic Plan of Action where Goals 2011 aim at favourable trends in diet, physical activity and overweight, while Visions 2021 aim at reaching a certain population level in year 2021. Four in ten of the goals and one in ten of the visions have been fulfilled among adults, while seven in ten of the goals and three in ten of the visions have been fulfilled among children. Each of the five Nordic countries experiences public health challenges: Denmark is challenged with smoking and alcohol behaviour among adults. Sedentary behaviour may be an increasing challenge among adults in Finland where screen time is on the rise. The prevalence and trends in overweight and obesity indicate that this is a major public health challenge among adults in Iceland. The high proportion of physically inactive adults in Norway is of concern. Finally, the increasing proportion with an unhealthy diet among adults in Sweden is also of concern. In addition, the high proportion of inactive children in Sweden is worrying from a public health perspective.

Conclusion: The Nordic region experienced an increase in unhealthy dietary habits, high recreational screen time and obesity prevalence among adults between 2011 and 2014. Among children, the picture is more optimistic; however, there is still room for improvement as unhealthy lifestyles and overweight are highly prevalent among children and adults in the Nordic region. Groups like men, 45–65-y-olds, and individuals with low education may be relevant to target to fulfil the common Nordic ambition of ensuring better health and quality of life on equal terms for all Nordic citizens.

The complete report can be downloaded for free from:
<http://norden.diva-portal.org/smash/get/diva2:1066553/FULLTEXT01.pdf>

Full report is also available as 'Supplementary File'.

Keywords: Health behaviour; obesity; adults; children; social inequality; trend; Nordic region; The Nordic Plan of Action.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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